

REMARKS

The present application includes claims 23-78. Claims 1-22 were cancelled. Claims 53-78 are new. Claims 23-26, 31, 32, 34, 38-39, 41, 45 and 47 are currently amended.

The drawings are objected to for not showing the features of claims 18, 19 and 44. In response, applicant deleted claims 18 and 19 and added an aircraft to Fig. 1.

The drawings are objected to for including a reference 54 not related to in the specification. The Examiner stated that the only relation to reference 54 was deleted in an amendment of page 10, lines 16-21. Applicant respectfully submits that he is not aware of any such amendment. Applicant respectfully requests that the Examiner point out in which paper the amendment was made, so that applicant can reinstate reference 54.

Fig. 1 was objected to because reference 40 was used for CAD. A corrected Fig. 1 is attached herewith.

The specification was objected to due to a link to a www site. Although applicant sees nothing wrong with including an address which is a reference to a location on the web in the application, the sentence relating to the www site was deleted.

The specification was objected to due to a discrepancy between two references to a standard document. The second reference was amended to overcome the objection.

Claims 1-22 were rejected under 35 USC 101 for not being claimed in combination with a tangible embodiment. Applicant cancelled claims 1-22 and replaced them with method claims and an apparatus claim 77.

Claims 23-28, 30-31 and 45-52 stand rejected under 35 USC 101 since the methods they claim in their broadest reasonable interpretation include a method executed by a human. The Examiner further stated that the claims are not directed to a technology art and are therefore non-statutory.

Applicant respectfully traverses the rejection and states that he is not aware of any limitation requiring that method claims not be executed by humans. In searching through MPEP 706.03(a) and chapter 2100, applicant's agent found no basis for this 101 rejection. Applicant respectfully requests that if the Examiner does not retract the rejection, the Examiner provide a basis in the MPEP or case law for the rejection. Nonetheless, in order to further prosecution toward allowance, claim 23 was amended to require that the gathering is performed by a computer.

Claim 44 was rejected under 35 U.S.C. 112, first paragraph. Applicant respectfully traverses the rejection. The design of aircrafts is known in the art and is therefore enabled. Claim 44 does not impose any limitations on the structure of the aircraft which would require a change in the structure of the aircraft and prevent enablement.

Claims 1-3, 5-7, 23-26, 32, 33, 38 and 45-47 were rejected under 35 U.S.C. 112, second paragraph, for using the term "major element". Applicant amended the claims to include an act of selecting major elements and therefore respectfully submit that the rejection was overcome.

Claims 23, 27 and 47 stand rejected under 35 U.S.C. 112, second paragraph, for using the term 'substantially'. Applicant respectfully traverses the rejection. The use of the term substantially in the context used in claims 23, 27 and 47 is permissible as evident from MPEP 2173.05(b). In order to expedite the prosecution, however, applicant broadened claim 47 so that it imposes its requirement on 'most' of the selected major elements instead of on 'substantially all' the major elements. Applicant removed the term 'substantially' from claim 23, in order to reduce the number of issues in dispute.

Claim 27 requires that the gathering of information includes gathering information which is not restricted from viewing by substantially any of the workers of the company. Applicant respectfully submits that any person of the art would be able to determine whether information is not restricted from viewing by substantially any of the workers of a company. While applicant cannot provide specific numbers, it is easily determined for a given situation whether a limited number of workers (e.g., workers associated with competing companies) break the rule that substantially all workers can view the database or they are an exception which does not break the rule.

Claims 11 and 12 were rejected for using the term "10% (1%) of the elements of the vehicle. Claims 11-12 were cancelled and the terms were used in their place in method claims 59, 72 and 74. Applicant respectfully submits that even if the term was indefinite in database claims 11-12, in method claims 59, 72 and 74 the term is definite. Nonetheless, applicant added the word physical to the claims, as suggested by the Examiner.

Claims 17, 23 and 31 stand rejected for using the term automatically. Although applicant is of the opinion that there is no problem with using the term "automatically", applicant amended claim 23 to use the term "by a computer" instead of "automatically" and claim 31 was amended to remove the term automatically. If these amendments change the scope of the claims, they broaden the claims.

Claim 64 is a method claim corresponding to claim 17, which was cancelled. Applicant submits that in the context of claim 64, the term 'automatically' is definite.

Claim 20 was rejected for clarity. New claim 66, which corresponds to old claim 20, was written according to the Examiner's suggestion to overcome the rejection.

Claim 41 was amended following the Examiner's suggestion.

Claim 50 was rejected for using the term configuration management codes. Applicant respectfully traverses the rejection and states that the term means codes related to configuration management. Applicant does not understand what is unclear about the term.

Claims 23-25 and 31 stand rejected under 35 U.S.C. 102(b) as being anticipated by Jolliffe et al., (U.S. patent 5,646,862).

Claims 26-27 and 29 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Jolliffe et al., (U.S. patent 5,646,862) in view of Barker et al (US patent 6,314,622).

Claim 28 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Jolliffe et al., (U.S. patent 5,646,862) in view of Barker et al and further in view of Bly et al. (U.S. patent 5,008,853).

Claim 30 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Jolliffe et al., (U.S. patent 5,646,862).

Claim 23 was amended to require gathering from at least one of the tools fewer than all the elements described by the tool. This amendment broadens the claim, as it does not require the collection of information on "all the major elements".

The translators of Jolliffe, in contrast, relate to the entire internal data structures (col. 2, lines 54-56) and "must accurately support the data by providing a superset of all data required" (col. 4, lines 34-39).

The tool of Jolliffe is used to combine all the data of a plurality of different planning tools and therefore its translators collect all the data in all the tools. In contrast, claim 23 of the present application is directed at forming a vehicle index, as described for example in the first paragraph of the summary of the present application, and therefore the gathering tool collects only some of the data. Since the goals of the present application and of Jolliffe are totally different, it would not be obvious to change the method described by Jolliffe to perform the acts of claim 23.

The dependent claims are allowable at least because they depend on an allowable claim. Nonetheless, at least some of the claims add further patentability over the art.

Claim 26, for example, requires gathering references to documents describing the elements. Barker, referred to by the Examiner, presents a similar problem to that solved by some

embodiments of the present invention, namely the overload of information (col. 1, lines 15-29). To solve this problem, Barker suggests linking the documents to each other. Barker does not teach or suggest gathering references to documents into an index and is not related at all to storing such an index. Thus, neither of Jolliffe or Barker teaches or suggests gathering references to documents or including such references in an index. Absent this requirement, the combination of Jolliffe and Barker does not establish a *prima facie* case of obviousness, regarding claim 26.

Claim 27, for example, requires gathering information which is not restricted from viewing by substantially any of the workers of the company. The Examiner stated that it would be obvious to design a vehicle design index comprising information which is not restricted for viewing by any of the workers of the company, as having restricted information in an open index would undermine the restricted nature of the information.

Applicant respectfully notes that the Examiner has not shown art that describes a vehicle design index that does not include all the information, as neither of Barker and Jolliffe describes such an index. In fact, as discussed above, Barker and Jolliffe relate to full scale systems which include all the available information. Therefore, there is no reason to assume that Barker and Jolliffe would leave out restricted information or any other information. Furthermore, neither of Barker and Jolliffe has suggested an open index which can be viewed by substantially all workers of a company. The Examiner, therefore, has not established a *prima facie* case of obviousness regarding claim 27.

New claim 76, for example, requires gathering information on both electrical and mechanical elements. Jolliffe, in contrast, relates only to electrical elements (abstract, col. 2, lines 42-43) and not to both mechanical and electrical elements.

Claims 32-44 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Jolliffe et al. (U.S. patent 5,646,862) in view of Benjamin et al., (U.S. patent 6,438,535) and further in view of Wakiyama et al. (U.S. patent 5,806,069). The Examiner stated that Wakiyama teaches "product manufacturing information" which includes "information necessary to manufacture the intermediate and end products". The Examiner stated that it would be obvious to include references to workers in charge of the elements in view of the product manufacturing information.

Applicant respectfully traverses the rejection and states that the Examiner has not established a *prima facie* case of obviousness, since none of the references cited by the Examiner teach or suggest gathering information regarding an element, including a reference to a worker in charge of the element.

Unlike that stated by the Examiner, it would not be obvious to include references to

workers in the system of Wakiyama, since the system of Wakiyama has a totally different goal from that of the present invention. Claim 32 requires selecting fewer than all the physical elements of the vehicle to serve as major elements that represent the vehicle. Therefore, the database of claim 32 does not replace the computerized tools used in planning the vehicle by each department. The references to workers in charge of the elements are included in the database in order to allow workers to quickly contact a worker in charge of a specific element in order to discuss the element. This is explained on page 18, lines 30-34 of the present application. Wakiyama, on the other hand, is directed at "totally managing sets of construction related information" (abstract) and therefore includes all the information on the element and does not reference workers in charge of elements. Wakiyama, as well as Jolliffe and Benjamin, are not directed at including fewer than all the physical elements in a database, but rather are directed at integrating together all the available information. Once all the information is integrated together, a person of the art would assume that there is no need to reference a worker who will provide the information.

At least some of the dependent claims add further patentability over the cited art. Claim 54, for example, requires gathering at least three levels of a hierarchy of systems and sub-systems to which the major elements belong. Applicant did not find such hierarchy in the cited art. It would not be obvious to provide such a hierarchy in the systems of the cited art, as they are directed at complete database solutions including all the information, and not at a database including information on fewer than all the elements.

Claim 57, for example, requires storing the gathered data in the database having a total storage space of less than 1Gbyte. In highlighting light weight embodiments, this claim emphasizes the difference between the prior art and the system of claim 32 which relates to a database that does not include information on all the elements of the vehicle.

New independent claim 72 is similar to claim 32, but requires selecting less than 10% of the elements of the vehicle to serve as major elements that represent the vehicle. This requirement appeared originally in claim 11 of the present application and was rejected by the Examiner as being obvious in view of the decision in Gardner v. TEC systems. Applicant respectfully traverses this rejection. The generation of a database which only states major elements is a change in concept relative to the art and not a mere change in magnitude.

The prior art as demonstrated by Benjamin and Wakiyama is directed at a central database which lists all the elements of the vehicle (Benjamin, col. 3, lines 5-8 and Wakiyama, abstract and col. 1, line 63). In contrast, the invention defined by claim 72 is not directed at covering all the

elements of the vehicle. Therefore, it would not have been obvious to modify Benjamin and/or Wakiyama to include descriptions of fewer elements, as this would be counter to the purpose of their databases.

The dependent claims are allowable at least because of their parent claim.

Claims 45-49 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Benjamin et al., (U.S. patent 6,438,535) in view of Cornett et al. (U.S. patent 5,216,612).

Applicant respectfully traverses the rejection and states that the Examiner has not established a *prima facie* rejection of claim 45, since the Examiner has not shown a reference that assigns codes to elements responsive to the system to which the element belongs, as required by claim 45. In addition, the Examiner has not shown assigning codes which are unique to each occurrence of the element in the aircraft. Furthermore, the Examiner has not explained why it would be obvious to utilize methods of assigning codes in computer systems, which are produced in a very innovative industry, to aircrafts, which are designed in a very conservative industry. In the aircraft industry, different departments use different tools in accordance with long standing traditions.

Cornett describes, to applicant's best understanding, the well known method of assigning part numbers according to the part being used, regardless of its location in the system. None of the plurality of codes assigned to a part (col. 5, lines 24-36) differentiates between different occurrences of the part in the system. Rather, the different part numbers relate to alternative parts which may be used instead of the original part.

Claims 50-52 stand rejected under 35 U.S.C. 102(b) as being anticipated by Barnewall et al., (U.S. patent 5,634,055). The Examiner referred to col. 2, line 64 – col. 3, line 24.

Applicant respectfully traverses the rejection and states that the Examiner has not established a *prima facie* case of anticipation, since Barnewall lacks at least one element of claim 50.


Claim 50 requires assigning each part of an aircraft, a part number code which includes an assigned configuration management code of an aspect to which the part belongs and assigning worker codes which include the configuration management code of the aspect on which the worker works.

Barnewall does not relate to assigning part number codes, but rather to assigning IDs to trips of aircrafts. The codes in Fig. 3 of Barnewall are flight number codes. Barnewall does not assign worker codes at all.

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In view of the above remarks, applicant submits that the claims are patentable over the prior art. Allowance of the application is respectfully awaited. If, however, the Examiner is not convinced and the Examiner is of the opinion that a telephone conversation may forward the present application toward allowance, applicant respectfully requests that the Examiner call the undersigned at 1 (877) 428-5468. Please note that this is a direct *toll free* number in the US that is answered in the undersigned's Israel office. Israel is 7 hours ahead of Washington.

Respectfully submitted,
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